

Title (en)
DETECTION OF BRIDGE TAP USING FREQUENCY DOMAIN ANALYSIS

Title (de)
Feststellung einer Abzweigung mittels Frequenzbereichsanalyse

Title (fr)
Détection d'un pont de raccordement par analyse de domain de fréquence

Publication
EP 1181567 A1 20020227 (EN)

Application
EP 00923488 A 20000418

Priority
• US 0010436 W 20000418
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Abstract (en)
[origin: WO0063709A1] A method for detecting the presence of a bridge tap (40) and other types of fault in a transmission line (30). Initially, test signals of predetermined frequencies are transmitted into a transmitting end (10) of the transmission line (30). The test signals are received at a receiving end (20) of the transmission line (30) and the amplitudes of the received signal are measured. A frequency response of the transmission line (30) is computed based on the measured amplitudes. The frequency response is then analyzed for the presence of a frequency-domain signature that corresponds to one of the detectable types of fault. The presence of a bridge tap (40) or another type of fault is identified based on the detected frequency-domain signature. The frequency-domain signature associated with a bridge tap (40) can comprise a set of one or more attenuation dips in the frequency response, with each attenuation dip corresponding to a local minima in the frequency response. The length (1) of the bridge tap (40) can be estimated based on a fundamental frequency of the set of harmonically related attenuation dips. Also, the location of the bridge tap (40) in the transmission line (30) can be estimated by performing a time domain reflectometer (TDR) test.

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